MDE
MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Kendl P. Philbrick
Secretary

Jonas A. Jacobson
Deputy Secretary

August 19, 2004

Dear Resident:

The Maryland Department of the Environment (MDE) continues to investigate the drinking water well impacts from methyl tertiary-butyl ether (MTBE) in the vicinity of the Upper Crossroads Exxon gasoline service station. This letter is an update on activities that have taken place since the last public meeting held on July 20, 2004.

Groundwater Sampling

- To date, 311 residential well sites have been sampled. Of these wells: 11 had concentrations of MTBE above the State action level of 20 parts per billion (ppb); 12 were between 10 and 20 ppb; 12 were between 5 and 10 ppb; 89 were between 0.5 and 5 ppb; 45 had concentrations above non-detect but below 0.5 ppb; and 142 wells tested non-detect.

- In reviewing the research on MTBE's health effects, the U.S. Environmental Protection Agency (EPA) has concluded that there is no measurable health effect from low level MTBE exposure in drinking water. EPA's health advisory states that levels of contamination at or below 20 ppb provide a large margin of safety from adverse health effects.

- ExxonMobil continues to install and maintain water treatment systems on residential drinking water wells where MTBE has been detected. As of August 13, 2004, ExxonMobil had installed 101 triple canister carbon filtration systems at these homes and will continue to install units until all private wells with MTBE detections are addressed.

Ongoing Remedial Activity

- The Soil Vacuum Extraction system continues to operate at the Exxon station. This system is removing contaminated soil vapor from around the storage tank systems and surrounding soil. Vapor from this system is treated before it is exhausted into the air. Also, there are two "water" tanks on-site. The one marked "pool water" is being used as a temporary water supply while testing is being conducted on the on-site drinking water well. This water will also be used for certain drilling activities that require fresh water. A second tank is also located on-site. This tank receives the purge water from well sampling from on and off-site locations. A & A Environmental is shipping this water off-site under manifest for disposal.

Subsurface Investigation

On July 14, 2004, ExxonMobil submitted a Subsurface Investigation Work Plan. On August 5, 2004, MDE approved, with modifications, the Subsurface Investigation Work Plan. Both of these documents are available on our web site at:

www.mde.state.md.us/Programs/Landprograms/Oil_Control/RemediationSites

- The hydro geological investigation is underway to evaluate underground conditions including groundwater flow, the overburden (soil above the bedrock), and the bedrock itself. The initial phase, including an intensive review of all existing resources such as aerial photos, topographic and geologic maps, and available data on existing wells in the area, has been completed. GPS equipment is being used to determine the location of domestic drinking water wells, monitoring wells, residential septic systems, and storm water management systems. The purpose is to assist in the development of a three-dimensional understanding of the subsurface.

- A soil investigation using a Membrane Interphase Probe (MIP) has been completed at the Exxon station. The MIP study was used to identify locations for future borings to collect soil samples and to assist in the placement of groundwater monitoring wells. The MDE has reviewed the MIP data collected on-site, and six soil borings and six groundwater-monitoring wells will be installed at the Exxon station in accordance with the data collected. This is part of a geophysical survey of the overburden (the soils overlying bedrock which extend approximately 40 to 50 feet below grade) that will be conducted at the Exxon station and other locations in the study area.

- Well sampling has started on the undeveloped properties in the Del-Mar Farms subdivision. ExxonMobil continues to seek access from several property owners in order to conduct tests associated with the investigation.

- Investigations were conducted on the drinking water well at the Exxon station to identify the location and orientation of potential bedrock fractures and major water bearing zones, which will be the subject of further testing. The tests utilized included Accoustic Televiewer, Spontanious Potential, Neuron Density, Temperature Log, and Caliper Log. All are very detailed tests that will provide information on water bearing fracture zones. This type of geophysical investigation will be conducted at locations within the BB&T Bank property and the Del-Mar Farms subdivision as well as at other locations within the study area.

- A packer test was performed on the Exxon well. In a packer test, two "balloons" are used to isolate a section of the well to allow for discrete sampling of a location within the well. Using this technique, pumping tests were done to determine how much water comes into the well at what location in the well, and water samples were taken at various isolated sections. This type of packer test will be conducted at locations within the BB&T Bank property and the Del-Mar Farms subdivision as well as at other locations within the study area.

- A technique called electrical resistivity profiling will be used to map the depth to bedrock and the contours of the slope and surface of the bedrock along transect lines traversing several properties near the Exxon station. This portion of the study will assist in the understanding of the bedrock and overburden and how groundwater is flowing. The locations of this activity have been approved by MDE.

Tracer Test

During the week of July 19, 2004, an enhanced leak detection test, called Tracer Tight, was conducted at the station. The Tracer test is designed to detect both liquid and vapor releases from the underground storage systems at a level below the threshold for regulatory compliance and below the most commonly required release detection tests. Pre-testing activities required the replacement or repair of 32 specific components that showed some level of vapor release. After the pretest and upon completion of the Tracer test, the underground storage tank systems were determined to be tight.

Other Areas

- In addition to the ExxonMobil investigation, the Department has identified other potential sources of MTBE within the study area. We have issued a Notice of Violation to a site that was dismantling heating oil tanks in a residential area. This site has been reinspected, all petroleum-handling activities have ceased, and the tanks and oil have been removed. The MDE has also witnessed the removal of one heating oil tank from another site. Seven tons of oil-impacted soil was removed. We have also reviewed petroleum-handling activities with a local landscaper. The Department will continue to investigate other sources and address them as needed.

  Several residences outside of the Upper Crossroads study area have sampled their wells independently. The Harford County Health Department has agreed to collect copies of those sample reports and map out areas of concern. The Department will be working with the Health Department to design proper investigations for these areas. Case activities have already started in the communities of Bellvale, Glen Elyn, and Putnam.

Emergency Regulations

- On August 11, 2004, Governor Ehrlich announced emergency regulations related to underground storage systems in response to the growing concern of MTBE being found in the water in sensitive groundwater use areas. These emergency regulations that MDE is drafting will require enhanced release detection and upgrading to double walled protection of storage systems in these areas. Although these regulations may not directly help with the current contamination in Fallston, we believe they will result in the prevention of future releases.

The MDE will continue to keep the community informed about the progress of this investigation. We have posted many of the case documents on our web site at:

www.mde.state.md.us/Programs/Landprograms/Oil_Control/RemediationSites

Furthermore, MDE has requested that ExxonMobil provide a written update to the community that will be sent several times a month. If you have any questions or concerns, please feel free to contact the Oil Control Program at 410-537-3442. You may also correspond with Herbert Meade, Administrator of the Oil Control Program, at hmeade@mde.state.md.us.

Very truly yours,

Kendl P. Philbrick

Kendl P. Philbrick
Secretary

KPP:rjm

cc: Dr. Andrew Bernstein (Harford County Health Officer)
Harford County State Delegation
Mr. Ken Drake (ExxonMobil Corp)
The Honorable Barbara Mikulski
Mr. Ed Miller
The Honorable Paul Sarbanes
Mr. Horacio Tablada